



## SEQUENCE LISTING

H4

<120> Freudenthal, Terry M.  
<120> Gnatyev, George M.

<120> COMPOSITIONS AND METHODS FOR TREATING HEMORRHAGIC VIRUS  
INFECTIONS AND OTHER DISORDERS

<130> 24881-301D

<140> US/10/038,557  
<141> 2002-01-03

<150> 09/840,707  
<151> 2001-04-23

<150> 09/562,979  
<151> 2000-04-27

<150> 60/198,210  
<151> 1999-04-27

<160> 26

<170> PatentIn Ver. 2.0

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<213> Homo sapiens

<220>  
<223> Recombinant Interleukin 1-alpha

<300>  
<308> AAA59134/GenBank  
<309> 1994-12-13

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Lys Ser Phe Tyr His Val Ser Tyr Gly Pro Leu His Glu Gly Cys Met  
35 40 45  
Asp Gln Ser Val Ser Leu Ser Ile Ser Glu Thr Ser Lys Thr Ser Lys  
50 55 60  
Leu Thr Phe Lys Glu Ser Met Val Val Val Ala Thr Asn Gly Lys Val  
65 70 75 80  
Leu Lys Lys Arg Arg Leu Ser Leu Ser Gln Ser Ile Thr Asp Asp Asp  
85 90 95  
Leu Glu Ala Ile Ala Asn Asp Ser Glu Glu Glu Ile Ile Lys Pro Arg  
100 105 110  
Ser Ala Pro Phe Ser Phe Leu Ser Asn Val Lys Tyr Asn Phe Met Arg  
115 120 125  
Ile Ile Lys Tyr Glu Phe Ile Leu Asn Asp Ala Leu Asn Gln Ser Ile  
130 135 140  
Ile Arg Ala Asn Asp Gln Tyr Leu Thr Ala Ala Leu His Asn Leu

145	150	155	160
Asp Glu Ala Val Lys Phe Asp Met Gly Ala Tyr Lys Ser Ser Lys Asp			
165		170	175
Asp Ala Lys Ile Thr Val Ile Leu Arg Ile Ser Lys Thr Gln Leu Tyr			
180		185	190
Val Thr Ala Gln Asp Glu Asp Gln Pro Val Leu Leu Lys Glu Met Pro			
195	200		205
Glu Ile Pro Lys Thr Ile Thr Gly Ser Glu Thr Asn Leu Leu Phe Phe			
210	215		220
Trp Glu Thr His Gly Thr Lys Asn Tyr Phe Thr Ser Val Ala His Pro			
225	230	235	240
Asn Leu Phe Ile Ala Thr Lys Gln Asp Tyr Trp Val Cys Leu Ala Gly			
245		250	255
Gly Pro Pro Ser Ile Thr Asp Phe Gln Ile Leu Glu Asn Gln Ala			
260		265	270

<210> 2

<211> 269

<212> PRT

<213> Homo sapiens

<220>

<223> Interleukin-1 beta (catabolin)

<300>

<308> P01584/Genbank

<309> 1986-07-21

<400> 2

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Gly Asn Glu Asp Asp Leu Phe Phe	Glu Ala Asp Gly Pro Lys Gln Met	
20	25	30

Lys Cys Ser Phe Gln Asp Leu Asp	Leu Cys Pro Leu Asp Gly Gly Ile	
35	40	45

Gln Leu Arg Ile Ser Asp His His Tyr Ser Lys	Gly Phe Arg Gln Ala	
50	55	60

Ala Ser Val Val Val Ala Met Asp Lys Leu Arg Lys	Met Leu Val Pro		
65	70	75	80

Cys Pro Gln Thr Phe Gln Glu Asn Asp	Leu Ser Thr Phe Phe Pro Phe	
85	90	95

Ile Phe Glu Glu Pro Ile Phe Phe Asp Thr Trp Asp Asn	Glu Ala	
100	105	110

Tyr Val His Asp Ala Pro Val Arg Ser Leu Asn Cys	Thr Leu Arg Asp	
115	120	125

Ser Gln Gln Lys Ser Leu Val Met Ser Gly Pro	Tyr Glu Leu Lys Ala	
130	135	140

Leu His Leu Gln Gln Asp Met Glu Gln Gln Val Val Phe Ser Met

145	150	155	160
Ser Phe Val Gln Gly Glu Glu Ser Asn Asp Lys Ile Pro Val Ala Leu			
165		170	175
Gly Leu Lys Glu Lys Asn Leu Tyr Leu Ser Cys Val Leu Lys Asp Asp			
180		185	190
Lys Pro Thr Leu Gln Leu Glu Ser Val Asp Pro Lys Asn Tyr Pro Lys			
195	200	205	
Lys Lys Met Glu Lys Arg Phe Val Phe Asn Lys Ile Glu Ile Asn Asn			
210	215	220	
Lys Leu Glu Phe Glu Ser Ala Gln Phe Pro Asn Trp Tyr Ile Ser Thr			
225	230	235	240
Ser Gln Ala Glu Asn Met Pro Val Phe Leu Gly Gly Thr Lys Gly Gly			
245		250	255
Gln Asp Ile Thr Asp Phe Thr Met Gln Phe Val Ser Ser			
260	265		

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<211> 569

<212> PRT

<213> Homo sapiens

<220>

<223> Interleukin-1 receptor, Type I precursor

<300>

<308> P14778/GenBank

<309> 1990-04-01

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Met	Lys	Val	Leu	Leu	Arg	Leu	Ile	Cys	Phe	Ile	Ala	Leu	Leu	Ile	Ser
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Ser	Leu	Glu	Ala	Asp	Lys	Cys	Lys	Glu	Arg	Glu	Glu	Lys	Ile	Ile	Leu
								20		25			30		

Val	Ser	Ser	Ala	Asn	Glu	Ile	Asp	Val	Arg	Pro	Cys	Pro	Leu	Asn	Pro
								35		40			45		

Asn	Glu	His	Lys	Gly	Thr	Ile	Thr	Trp	Tyr	Lys	Asp	Asp	Ser	Lys	Thr
								50		55			60		

Pro	Val	Ser	Thr	Glu	Gln	Ala	Ser	Arg	Ile	His	Gln	His	Lys	Glu	Lys
								65		70			75	80	

Leu	Trp	Phe	Val	Pro	Ala	Lys	Val	Glu	Asp	Ser	Gly	His	Tyr	Tyr	Cys
								85		90			95		

Val	Val	Arg	Asn	Ser	Ser	Tyr	Cys	Leu	Arg	Ile	Lys	Ile	Ser	Ala	Lys
								100		105			110		

Phe	Val	Glu	Asn	Glu	Pro	Asn	Leu	Cys	Tyr	Asn	Ala	Gln	Ala	Ile	Phe
								115		120			125		

Lys	Gln	Lys	Leu	Pro	Val	Ala	Gly	Asp	Gly	Gly	Leu	Val	Cys	Pro	Tyr
								130		135			140		

Met Glu Phe Phe Lys Asn Glu Asn Asn Glu Leu Pro Lys Leu Gln Trp

145	150	155	160
Tyr Lys Asp Cys Lys Pro Leu Leu Leu Asp Asn Ile His Phe Ser Gly			
165	170	175	
Val Lys Asp Arg Leu Ile Val Met Asn Val Ala Glu Lys His Arg Gly			
180	185	190	
Asn Tyr Thr Cys His Ala Ser Tyr Thr Tyr Leu Gly Lys Gln Tyr Pro			
195	200	205	
Ile Thr Arg Val Ile Glu Phe Ile Thr Leu Glu Glu Asn Lys Pro Thr			
210	215	220	
Arg Pro Val Ile Val Ser Pro Ala Asn Glu Thr Met Glu Val Asp Leu			
225	230	235	240
Gly Ser Gln Ile Gln Leu Ile Cys Asn Val Thr Gly Gln Leu Ser Asp			
245	250	255	
Ile Ala Tyr Trp Trp Asn Gly Ser Val Ile Asp Glu Asp Asp Pro			
260	265	270	
Val Leu Gly Glu Asp Tyr Tyr Ser Val Glu Asn Pro Ala Asn Lys Arg			
275	280	285	
Arg Ser Thr Leu Ile Thr Val Leu Asn Ile Ser Glu Ile Glu Ser Arg			
290	295	300	
Phe Tyr Lys His Pro Phe Thr Cys Phe Ala Lys Asn Thr His Gly Ile			
305	310	315	320
Asp Ala Ala Tyr Ile Gln Leu Ile Tyr Pro Val Thr Asn Phe Gln Lys			
325	330	335	
His Met Ile Gly Ile Cys Val Thr Leu Thr Val Ile Ile Val Cys Ser			
340	345	350	
Val Phe Ile Tyr Lys Ile Phe Lys Ile Asp Ile Val Leu Trp Tyr Arg			
355	360	365	
Asp Ser Cys Tyr Asp Phe Leu Pro Ile Lys Ala Ser Asp Gly Lys Thr			
370	375	380	
Tyr Asp Ala Tyr Ile Leu Tyr Pro Lys Thr Val Gly Glu Gly Ser Thr			
385	390	395	400
Ser Asp Cys Asp Ile Phe Val Phe Lys Val Leu Pro Glu Val Leu Glu			
405	410	415	
Lys Gln Cys Gly Tyr Lys Leu Phe Ile Tyr Gly Arg Asp Asp Tyr Val			
420	425	430	
Gly Glu Asp Ile Val Glu Val Ile Asn Glu Asn Val Lys Lys Ser Arg			
435	440	445	
Arg Leu Ile Ile Ile Leu Val Arg Glu Thr Ser Gly Phe Ser Trp Leu			
450	455	460	
Gly Gly Ser Ser Glu Glu Gln Ile Ala Met Tyr Asn Ala Leu Val Gln			
465	470	475	480
Asp Gly Ile Lys Val Val Leu Leu Glu Leu Glu Lys Ile Gln Asp Tyr			
485	490	495	
Glu Lys Met Pro Glu Ser Ile Lys Phe Ile Lys Gln Lys His Gly Ala			

500

505

510

Ile Arg Trp Ser Gly Asp Phe Thr Gln Gly Pro Gln Ser Ala Lys Thr  
515 520 525

Arg Phe Trp Lys Asn Val Arg Tyr His Met Pro Val Gln Arg Arg Ser  
530 535 540

Pro Ser Ser Lys His Gln Leu Leu Ser Pro Ala Thr Lys Glu Lys Leu  
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Gln Arg Glu Ala His Val Pro Leu Gly  
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<210> 4  
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<212> PRT  
<213> Homo sapiens

<220>  
<223> Interleukin-1 receptor, Type II precursor

<300>  
<308> P27930/GenBank  
<309> 1993-08-01

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20 25 30

Arg His Tyr Lys Arg Glu Phe Arg Leu Glu Gly Glu Pro Val Ala Leu  
35 40 45

Arg Cys Pro Gln Val Pro Tyr Trp Leu Trp Ala Ser Val Ser Pro Arg  
50 55 60

Ile Asn Leu Thr Trp His Lys Asn Asp Ser Ala Arg Thr Val Pro Gly  
65 70 75 80

Glu Glu Glu Thr Arg Met Trp Ala Gln Asp Gly Ala Leu Trp Leu Leu  
85 90 95

Pro Ala Leu Gln Glu Asp Ser Gly Thr Tyr Val Cys Thr Thr Arg Asn  
100 105 110

Ala Ser Tyr Cys Asp Lys Met Ser Ile Glu Leu Arg Val Phe Glu Asn  
115 120 125

Thr Asp Ala Phe Leu Pro Phe Ile Ser Tyr Pro Gln Ile Leu Thr Leu  
 130 135 140

Ser Thr Ser Gly Val Leu Val Cys Pro Asp Leu Ser Glu Phe Thr Arg  
145 150 155 160

Asp Lys Thr Asp Val Lys Ile Gln Trp Tyr Lys Asp Ser Leu Leu Leu  
165 170 175

Asp Lys Asp Asn Glu Lys Phe Leu Ser Val Arg Gly Thr Thr His Leu  
180 185 190

Leu Val His Asp Val Ala Leu Glu Asp Ala Gly Tyr Tyr Arg Cys Val  
195 200 205

Leu Thr Phe Ala His Glu Gly Gln Gln Tyr Asn Ile Thr Arg Ser Ile

210

215

220

Glu	Leu	Arg	Ile	Lys	Lys	Lys	Glu	Glu	Thr	Ile	Pro	Val	Ile	Ile	
225				230			235						240		
Ser	Pro	Leu	Lys	Thr	Ile	Ser	Ala	Ser	Leu	Gly	Ser	Arg	Leu	Thr	Ile
				245				250					255		
Pro	Cys	Lys	Val	Phe	Leu	Gly	Thr	Gly	Thr	Pro	Leu	Thr	Thr	Met	Leu
			260				265					270			
Trp	Trp	Thr	Ala	Asn	Asp	Thr	His	Ile	Glu	Ser	Ala	Tyr	Pro	Gly	Gly
			275			280						285			
Arg	Val	Thr	Glu	Gly	Pro	Arg	Gln	Glu	Tyr	Ser	Glu	Asn	Asn	Glu	Asn
	290				295						300				
Tyr	Ile	Glu	Val	Pro	Leu	Ile	Phe	Asp	Pro	Val	Thr	Arg	Glu	Asp	Leu
	305				310				315				320		
His	Met	Asp	Phe	Lys	Cys	Val	Val	His	Asn	Thr	Leu	Ser	Phe	Gln	Thr
			325					330					335		
Leu	Arg	Thr	Thr	Val	Lys	Glu	Ala	Ser	Ser	Thr	Phe	Ser	Trp	Gly	Ile
			340				345					350			
Val	Leu	Ala	Pro	Leu	Ser	Leu	Ala	Phe	Leu	Val	Leu	Gly	Gly	Ile	Trp
			355				360					365			
Met	His	Arg	Arg	Cys	Lys	His	Arg	Thr	Gly	Lys	Ala	Asp	Gly	Leu	Thr
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Val	Leu	Trp	Pro	His	His	Gln	Asp	Phe	Gln	Ser	Tyr	Pro	Lys		
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<213> Homo sapiens

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<223> Interleukin-1 Receptor Antagonist Protein  
Precursor (IL-1RA; ICIL-1RA; IRAP)

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<309> 1990-11-01

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Phe	Leu	Phe	His	Ser	Glu	Thr	Ile	Cys	Arg	Pro	Ser	Gly	Arg	Lys	Ser
				20				25					30		

Ser	Lys	Met	Gln	Ala	Phe	Arg	Ile	Trp	Asp	Val	Asn	Gln	Lys	Thr	Phe
		35				40						45			

Tyr	Leu	Arg	Asn	Asn	Gln	Leu	Val	Ala	Gly	Tyr	Leu	Gln	Gly	Pro	Asn
		50				55					60				

Val	Asn	Leu	Glu	Glu	Lys	Ile	Asp	Val	Val	Pro	Ile	Glu	Pro	His	Ala
	65				70					75			80		

Leu Phe Leu Gly Ile His Gly Lys Met Cys Leu Ser Cys Val Lys

85	90	95	
Ser Gly Asp Glu Thr Arg Leu Gln Leu	Glu Ala Val Asn Ile Thr Asp		
100	105	110	
Leu Ser Glu Asn Arg Lys Gln Asp Lys Arg Phe Ala Phe	Ile Arg Ser		
115	120	125	
Asp Ser Gly Pro Thr Thr Ser Phe Glu Ser Ala Ala Cys	Pro Gly Trp		
130	135	140	
Phe Leu Cys Thr Ala Met Glu Ala Asp Gln Pro Val Ser	Leu Thr Asn		
145	150	155	160
Met Pro Asp Glu Gly Val Met Val Thr Lys Phe Tyr Phe	Gln Glu Asp		
165	170	175	
Glu			
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<223> IL-1 receptor intracellular ligand protein comprising amino acid sequence			
<300>			
<310> 5,817,476			
<311> 1995-06-07			
<312> 1998-10-06			
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Arg Thr Arg Gly Gln Phe Asn Ala Phe Ser Tyr His Phe	Arg Gly Arg		
20	25	30	
Arg Ser Leu Glu Phe Ser Tyr Gln Glu Asp Lys Pro	Thr Lys Lys Thr		
35	40	45	
Arg Pro Arg Lys Ile Pro Ser Val Gly Arg Gln	Glu His Leu Ser		
50	55	60	
Asn Ser Thr Ser Ala Phe Ser Thr Arg Ser Asp Ala Ser	Gly Thr Asn		
65	70	75	80
Asp Phe Arg Glu Phe Val Leu Glu Met Gln Lys Thr Ile	Thr Asp Leu		
85	90	95	
Arg Thr Gln Ile Lys Lys Leu Glu Ser Arg Leu Ser Thr	Thr Glu Cys		
100	105	110	
Val Asp Ala Gly Gly Glu Ser His Ala Asn Asn Thr	Lys Trp Lys Lys		
115	120	125	
Asp Ala Cys Thr Ile Cys Glu Cys Lys Asp Gly Gln	Val Thr Cys Phe		
130	135	140	
Val Glu Ala Cys Pro Pro Ala Thr Cys Ala Val Pro	Val Asn Ile Pro		
145	150	155	160
Gly Ala Cys Cys Pro Val Cys Leu Gln Lys Arg Ala Glu			
Lys Pro			

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170

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comprising amino acid sequence

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<310> 5,817,476  
<311> 1995-06-07  
<312> 1998-10-06

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Ser Phe Glu Gly Lys Arg Arg Leu Leu Leu Ile Thr Ala Pro Lys Ala  
35 40 45  
Glu Asn Asn Met Tyr Val Gln Gln Arg Asp Glu Tyr Leu Glu Ser Phe  
50 55 60  
Cys Lys Met Ala Thr Arg Lys Ile Ser Val Ile Thr Ile Phe Gly Pro  
65 70 75 80  
Val Asn Asn Ser Thr Met Lys Ile Asp His Phe Gln Leu Asp Asn Glu  
85 90 95  
Lys Pro Met Arg Val Val Asp Asp Glu Asp Leu Val Asp Gln Arg Leu  
100 105 110  
Ile Ser Glu Leu Arg Lys Glu Tyr Gly Met Thr Tyr Asn Asp Phe Phe  
115 120 125  
Met Val Leu Thr Asp Val Asp Leu Arg Val Lys Gln Tyr Tyr Glu Val  
130 135 140  
Pro Ile Thr Met Lys Ser Val Phe Asp Leu Ile Asp Thr Phe Gln Ser  
145 150 155 160  
Arg Ile Lys Asp Met Glu Lys Gln Lys Lys Glu Gly Ile Val Cys Lys  
165 170 175  
Glu Glu Val Gly Gly Val Leu Glu Leu Phe Pro Ile Asn Gly Ser Ser  
180 185 190  
Val Val Glu Arg Glu Asp Val Pro Ala His Leu Val Lys Asp Ile Arg  
195 200 205  
Asn Tyr Phe Gln Val Ser Pro Glu Tyr Phe Ser Met Leu Leu Val Gly  
210 215 220  
Lys Asp Gly Asn Val Lys Ser Trp Tyr Pro Ser Pro Met Trp Ser Met  
225 230 235 240  
Val Ile Val Tyr Asp Leu Ile Asp Ser Met Gln Leu Arg Arg Gln Glu  
245 250 255  
Met Ala Ile Gln Gln Ser Leu Gly Met Arg Cys Gln Lys Met Ser Met

260	265	270
Gln Ala Met Val Thr Ile Val Thr Thr Lys Asp Thr Arg Met Val Thr		
275	280	285
Arg Met Thr Thr Val Ile Met Arg Val Ile Thr Met Asp Thr Leu Thr		
290	295	300
Glu Gln Lys Tyr Val Thr Leu Asp Ser Ala Ser Phe Leu Cys Ser Cys		
305	310	315
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15		
Ile Asn Leu Arg Glu Val Leu Asn Arg Phe Lys Leu Pro Pro Gly Glu		
20	25	30
Tyr Ile Leu Val Pro Ser Thr Phe Glu Pro Asn Lys Asp Gly Asp Phe		
35	40	45
Cys Ile Arg Val Phe Ser Glu Lys Lys Ala Asp Tyr Gln Ala Val Asp		
50	55	60
Asp Glu Ile Glu Ala Asn Leu Glu Glu Phe Asp Ile Ser Glu Asp Asp		
65	70	75
80		
Ile Asp Asp Gly Phe Arg Arg Leu Phe Ala Gln Leu Ala Gly Glu Asp		
85	90	95
Ala Glu Ile Ser Ala Phe Glu Leu Gln Thr Ile Leu Arg Arg Val Leu		
100	105	110
Ala Lys Arg Gln Asp Ile Lys Ser Asp Gly Phe Ser Ile Glu Thr Cys		
115	120	125
Lys Ile Met Val Asp Met Leu Asp Ser Asp Gly Ser Gly Lys Leu Gly		
130	135	140
Leu Lys Glu Phe Tyr Ile Leu Trp Thr Lys Ile Gln Lys Tyr Gln Lys		
145	150	155
160		
Ile Tyr Arg Glu Ile Asp Val Asp Arg Ser Gly Thr Met Asn Ser Tyr		
165	170	175
Glu Met Arg Lys Ala Leu Glu Ala Gly Phe Lys Met Pro Cys Gln		
180	185	190
Leu His Gln Val Ile Val Ala Arg Phe Ala Asp Asp Gln Leu Ile Ile		
195	200	205
Asp Phe Asp Asn Phe Val Arg Cys Leu Val Arg Leu Glu Thr Leu Phe		

210

215

220

Lys Ile Phe Lys Gln Leu Asp Pro Glu Asn Thr Gly Thr Ile Glu Leu  
225 230 235 240

Asp Leu Ile Ser Trp Leu Cys Phe Ser Val Leu  
245 250

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<223> IL-1 receptor intracellular ligand protein  
comprising amino acid sequence

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<311> 1995-06-07  
<312> 1998-10-06

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1 5 10 15

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20 25 30

Glu Ala Leu Arg Asn Glu Cys Leu Glu Ala Gly Thr Leu Phe Gln Asp  
35 40 45

Pro Ser Phe Pro Ala Ile Pro Ser Ala Leu Gly Phe Lys Glu Leu Gly  
50 55 60

Pro Tyr Ser Ser Lys Thr Arg Gly Met Arg Trp Lys Arg Pro Thr Glu  
65 70 75 80

Ile Cys Ala Asp Pro Gln Phe Ile Ile Gly Gly Ala Thr Arg Thr Asp  
85 90 95

Ile Cys Gln Gly Ala Leu Gly Asp Cys Trp Leu Leu Ala Ala Ile Ala  
100 105 110

Ser Leu Thr Leu Asn Glu Glu Ile Leu Ala Arg Val Val Pro Leu Asn  
115 120 125

Gln Ser Phe Gln Glu Asn Tyr Ala Gly Ile Phe His Phe Gln Phe Trp  
130 135 140

Gln Tyr Gly Glu Trp Val Glu Val Val Val Asp Asp Arg Leu Pro Thr  
145 150 155 160

Lys Asp Gly Glu Leu Leu Phe Val His Ser Ala Glu Gly Ser Glu Phe  
165 170 175

Trp Ser Ala Leu Leu Glu Lys Ala Tyr Ala Lys Ile Asn Gly Cys Tyr  
180 185 190

Glu Ala Leu Ser Gly Gly Ala Thr Thr Glu Gly Phe Glu Asp Phe Thr  
195 200 205

Gly Gly Ile Ala Glu Trp Tyr Glu Leu Lys Lys Pro Pro Pro Asn Leu  
210 215 220

Phe Lys Ile Ile Gln Lys Ala Leu Gln Lys Gly Ser Leu Leu Gly Cys

225	230	235	240
Ser Ile Asp Ile Thr Ser Ala Ala Asp Ser Glu Ala Ile Thr Phe Gln			
245	250	255	
Lys Leu Val Lys Gly His Ala Tyr Ser Val Thr Gly Ala Glu Glu Val			
260	265	270	
Glu Ser Asn Gly Ser Leu Gln Lys Leu Ile Arg Ile Arg Asn Pro Trp			
275	280	285	
Gly Glu Val Glu Trp Thr Gly Arg Trp Asn Asp Asn Cys Pro Ser Trp			
290	295	300	
Asn Thr Ile Asp Pro Glu Glu Arg Glu Arg Leu Thr Arg Arg His Glu			
305	310	315	320
Asp Gly Glu Phe Trp Met Ser Phe Ser Asp Phe Leu Arg His Tyr Ser			
325	330	335	
Arg Leu Glu Ile Cys Asn Leu Thr Pro Asp Thr Leu Thr Ser Asp Thr			
340	345	350	
Tyr Lys Lys Trp Lys Leu Thr Lys Met Asp Gly Asn Trp Arg Arg Gly			
355	360	365	
Ser Thr Ala Gly Gly Cys Arg Asn Tyr Pro Asn Thr Phe Trp Met Asn			
370	375	380	
Pro Gln Tyr Leu Ile Lys Leu Glu Glu Asp Glu Asp Glu Glu Asp			
385	390	395	400
Gly Glu Ser Gly Cys Thr Phe Leu Val Gly Leu Ile Gln Lys His Arg			
405	410	415	
Arg Arg Gln Arg Lys Met Gly Glu Asp Met His Thr Ile Gly Phe Gly			
420	425	430	
Ile Tyr Glu Val Pro Glu Glu Leu Ser Gly Gln Thr Asn Ile His Leu			
435	440	445	
Ser Lys Asn Phe Phe Leu Thr Asn Arg Ala Arg Glu Arg Ser Asp Thr			
450	455	460	
Phe Ile Asn Leu Arg Glu Val Leu Asn Arg Phe Lys Leu Pro Pro Gly			
465	470	475	480
Glu Tyr Ile Leu Val Pro Ser Thr Phe Glu Pro Asn Lys Asp Gly Asp			
485	490	495	
Phe Cys Ile Arg Val Phe Ser Glu Lys Lys Ala Asp Tyr Gln Ala Val			
500	505	510	
Asp Asp Glu Ile Glu Ala Asn Leu Glu Glu Phe Asp Ile Ser Glu Asp			
515	520	525	
Asp Ile Asp Asp Gly Val Arg Arg Leu Phe Ala Gln Leu Ala Gly Glu			
530	535	540	
Asp Ala Glu Ile Ser Ala Phe Glu Leu Gln Thr Ile Leu Arg Arg Val			
545	550	555	560
Leu Ala Lys Arg Gln Asp Ile Lys Ser Asp Gly Phe Ser Ile Glu Thr			
565	570	575	
Cys Lys Ile Met Val Asp Met Leu Asp Ser Asp Gly Ser Gly Lys Leu			

580	585	590	
Gly Leu Lys Glu Phe Tyr Ile Leu Trp Thr Lys Ile Gln Lys Tyr Gln			
595	600	605	
Lys Ile Tyr Arg Glu Ile Asp Val Asp Arg Ser Gly Thr Met Asn Ser			
610	615	620	
Tyr Glu Met Arg Lys Ala Leu Glu Ala Gly Phe Lys Met Pro Cys			
625	630	635	640
Gln Leu His Gln Val Ile Val Ala Arg Phe Ala Asp Asp Gln Leu Ile			
645	650	655	
Ile Asp Phe Asp Asn Phe Val Arg Cys Leu Val Arg Leu Glu Thr Leu			
660	665	670	
Phe Lys Ile Phe Lys Gln Leu Asp Pro Glu Asn Thr Gly Thr Ile Glu			
675	680	685	
Leu Asp Leu Ile Ser Trp Leu Cys Phe Ser Val Leu			
690	695	700	

<210> 10  
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 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Synthetic DNA  
 which is antisense to human IL-1 beta  
  
 <300>  
 <301> Fujiwara, Toshiyoshi  
 Grimm, Elizabeth A.  
 <302> Specific Inhibition of Interleukin 1 beta Gene  
 Expression by an Antisense Oligonucleotide: Obligatory  
 Role of Interleukin 1 in the Generation of  
 Lymphokine-activated Killer Cells  
 <303> Cancer Res.  
 <304> 52  
 <306> 4954-4959  
 <307> 1992-09-15  
  
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<210> 11  
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 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence: Synthetic DNA  
 which is antisense to human IL-1 alpha  
  
 <300>  
 <301> Maier, Jeanette A.  
 Voulalas, Pamela  
 Roeder, David  
 Maclag, Thomas  
 <302> Extension of the Life-Span of Human Endothelial Cells  
 by an Interleukin-1 alpha Antisense Oligomer  
 <303> Science  
 <304> 249

<306> 1570-1574  
<307> 1990-09-28

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<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic phosphorothioate DNA which is antisense to IL-1 receptor

<300>  
<301> Miraglia, Loren  
Geiger, Thomas  
Bennett, C. Frank  
Dean, Nicholas M.  
<302> Inhibition of Interleukin-1 Type I Receptor Expression in Human Cell-Lines by an Antisense Phosphorothioate Oligodeoxynucleotide  
<303> Int. J. Immunopharmacol.  
<304> 18  
<305> 4  
<306> 227-240  
<307> 1996

<400> 12  
tgtgtcctgc aatcggtggc

<210> 13  
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<223> Description of Artificial Sequence: Synthetic phosphodiester or phosphorothioate DNA which is antisense to human IL-1 receptor

<300>  
<301> Burch, Ronald M.  
Mahan, Lawrence C.  
<302> Oligonucleotides Antisense to the Interleukin Receptor I mRNA Block the Effects of Interleukin I in Cultured Murine and Human Fibroblasts and in Mice  
<303> J. Clin. Invest.  
<304> 88  
<306> 1190-1196  
<307> 1991

<400> 13  
tctgagtaac actttcat

24

20

18

<210> 14  
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<220>  
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Cachectin)

<300>

<308> P01375/GenBank  
<309> 1986-07-21

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Leu Ser Leu Phe Ser Phe Leu Ile Val Ala Gly Ala Thr Thr Leu Phe  
35 40 45

Cys Leu Leu His Phe Gly Val Ile Gly Pro Gln Arg Glu Glu Phe Pro  
50 55 60

Arg Asp Leu Ser Leu Ile Ser Pro Leu Ala Gln Ala Val Arg Ser Ser  
65 70 75 80

Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His Val Val Ala Asn Pro  
85 90 95

Gln Ala Glu Gly Gln Leu Gln Trp Leu Asn Arg Arg Ala Asn Ala Leu  
100 105 110

Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln Leu Val Val Pro Ser  
115 120 125

Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu Phe Lys Gly Gln Gly  
130 135 140

Cys Pro Ser Thr His Val Leu Leu Thr His Thr Ile Ser Arg Ile Ala  
145 150 155 160

Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser Ala Ile Lys Ser Pro  
165 170 175

Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala Lys Pro Trp Tyr Glu  
180 185 190

Pro Ile Tyr Leu Gly Gly Val Phe Gln Leu Glu Lys Gly Asp Arg Leu  
195 200 205

Ser Ala Glu Ile Asn Arg Pro Asp Tyr Leu Asp Phe Ala Glu Ser Gly  
210 215 220

Gln Val Tyr Phe Gly Ile Ile Ala Leu  
225 230

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<213> Homo sapiens

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<223> Tumor Necrosis Factor Beta (Lymphotoxin Alpha)

<300>

<308> P01374/GenBank  
<309> 1989-03-01

<400> 15

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		20				25						30			
Gln	Gly	Leu	Pro	Gly	Val	Gly	Leu	Thr	Pro	Ser	Ala	Ala	Gln	Thr	Ala
		35				40					45				
Arg	Gln	His	Pro	Lys	Met	His	Leu	Ala	His	Ser	Thr	Leu	Lys	Pro	Ala
		50				55					60				
Ala	His	Leu	Ile	Gly	Asp	Pro	Ser	Lys	Gln	Asn	Ser	Leu	Leu	Trp	Arg
		65			70				75					80	
Ala	Asn	Thr	Asp	Arg	Ala	Phe	Leu	Gln	Asp	Gly	Phe	Ser	Leu	Ser	Asn
		85					90					95			
Asn	Ser	Leu	Leu	Val	Pro	Thr	Ser	Gly	Ile	Tyr	Phe	Val	Tyr	Ser	Gln
		100					105					110			
Val	Val	Phe	Ser	Gly	Lys	Ala	Tyr	Ser	Pro	Lys	Ala	Thr	Ser	Ser	Pro
		115					120					125			
Leu	Tyr	Leu	Ala	His	Glu	Val	Gln	Leu	Phe	Ser	Ser	Gln	Tyr	Pro	Phe
		130				135					140				
His	Val	Pro	Leu	Leu	Ser	Ser	Gln	Lys	Met	Val	Tyr	Pro	Gly	Leu	Gln
		145				150				155				160	
Glu	Pro	Trp	Leu	His	Ser	Met	Tyr	His	Gly	Ala	Ala	Phe	Gln	Leu	Thr
		165					170					175			
Gln	Gly	Asp	Gln	Leu	Ser	Thr	His	Thr	Asp	Gly	Ile	Pro	His	Leu	Val
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<223> Tumor Necrosis Factor p55 Receptor

<300>  
<308> AAA36753/GenBank  
<309> 1993-08-03

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			20				25					30			
His	Leu	Gly	Asp	Arg	Glu	Lys	Arg	Asp	Ser	Val	Cys	Pro	Gln	Gly	Lys
			35				40					45			
Tyr	Ile	His	Pro	Gln	Asn	Asn	Ser	Ile	Cys	Cys	Thr	Lys	Cys	His	Lys
			50				55				60				
Gly	Thr	Tyr	Leu	Tyr	Asn	Asp	Cys	Pro	Gly	Pro	Gly	Gln	Asp	Thr	Asp

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85	90	95	
Arg His Cys Leu Ser Cys Ser Lys Cys Arg Lys Glu Met Gly Gln Val			
100	105	110	
Glu Ile Ser Ser Cys Thr Val Asp Arg Asp Thr Val Cys Gly Cys Arg			
115	120	125	
Lys Asn Gln Tyr Arg His Tyr Trp Ser Glu Asn Leu Phe Gln Cys Phe			
130	135	140	
Asn Cys Ser Leu Cys Leu Asn Gly Thr Val His Leu Ser Cys Gln Glu			
145	150	155	160
Lys Gln Asn Thr Val Cys Thr Cys His Ala Gly Phe Phe Leu Arg Glu			
165	170	175	
Asn Glu Cys Val Ser Cys Ser Asn Cys Lys Lys Ser Leu Glu Cys Thr			
180	185	190	
Lys Leu Cys Leu Pro Gln Ile Glu Asn Val Lys Gly Thr Glu Asp Ser			
195	200	205	
Gly Thr Thr Val Leu Leu Pro Leu Val Ile Phe Phe Gly Leu Cys Leu			
210	215	220	
Leu Ser Leu Leu Phe Ile Gly Leu Met Tyr Arg Tyr Gln Arg Trp Lys			
225	230	235	240
Ser Lys Leu Tyr Ser Ile Val Cys Gly Lys Ser Thr Pro Glu Lys Glu			
245	250	255	
Gly Glu Leu Glu Gly Thr Thr Lys Pro Leu Ala Pro Asn Pro Ser			
260	265	270	
Phe Ser Pro Thr Pro Gly Phe Thr Pro Thr Leu Gly Phe Ser Pro Val			
275	280	285	
Pro Ser Ser Thr Phe Thr Ser Ser Ser Thr Tyr Thr Pro Gly Asp Cys			
290	295	300	
Pro Asn Phe Ala Ala Pro Arg Arg Glu Val Ala Pro Pro Tyr Gln Gly			
305	310	315	320
Ala Asp Pro Ile Leu Ala Thr Ala Leu Ala Ser Asp Pro Ile Pro Asn			
325	330	335	
Pro Leu Gln Lys Trp Glu Asp Ser Ala His Lys Pro Gln Ser Leu Asp			
340	345	350	
Thr Asp Asp Pro Ala Thr Leu Tyr Ala Val Val Glu Asn Val Pro Pro			
355	360	365	
Leu Arg Trp Lys Glu Phe Val Arg Arg Leu Gly Leu Ser Asp His Glu			
370	375	380	
Ile Asp Arg Leu Glu Leu Gln Asn Gly Arg Cys Leu Arg Glu Ala Gln			
385	390	395	400
Tyr Ser Met Leu Ala Thr Trp Arg Arg Arg Thr Pro Arg Arg Glu Ala			
405	410	415	
Thr Leu Glu Leu Leu Gly Arg Val Leu Arg Asp Met Asp Leu Leu Gly			

420

425

430

Cys	Leu	Glu	Asp	Ile	Glu	Glu	Ala	Leu	Cys	Gly	Pro	Ala	Ala	Leu	Pro
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Pro	Ala	Pro	Ser	Leu	Leu	Arg									
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<212> PRT  
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<300>  
<308> P20333/GenBank  
<309> 1991-08-01

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35 40 45

Thr Ala Gln Met Cys Cys Ser Lys Cys Ser Pro Gly Gln His Ala Lys  
50 55 60

Val Phe Cys Thr Lys Thr Ser Asp Thr Val Cys Asp Ser Cys Glu Asp  
65 70 75 80

Ser Thr Tyr Thr Gln Leu Trp Asn Trp Val Pro Glu Cys Leu Ser Cys  
                   85                   90                   95

Gly Ser Arg Cys Ser Ser Asp Gln Val Glu Thr Gln Ala Cys Thr Arg  
100 105 110

Glu Gln Asn Arg Ile Cys Thr Cys Arg Pro Gly Trp Tyr Cys Ala Leu  
115 120 125

Ser Lys Gln Glu Gly Cys Arg Leu Cys Ala Pro Leu Arg Lys Cys Arg  
 130 135 140

Pro Gly Phe Gly Val Ala Arg Pro Gly Thr Glu Thr Ser Asp Val Val  
145 150 155 160

Cys Lys Pro Cys Ala Pro Gly Thr Phe Ser Asn Thr Thr Ser Ser Thr  
                  165                 170                 175

Asp Ile Cys Arg Pro His Gln Ile Cys Asn Val Val Ala Ile Pro Gly  
180 185 190

Asn Ala Ser Arg Asp Ala Val Cys Thr Ser Thr Ser Pro Thr Arg Ser  
195 200 205

Met Ala Pro Gly Ala Val His Leu Pro Gln Pro Val Ser Thr Arg Ser  
210 215 220

Gln His Thr Gln Pro Thr Pro Glu Pro Ser Thr Ala Pro Ser Thr Ser  
 225 230 235 240  
 Phe Leu Leu Pro Met Gly Pro Ser Pro Pro Ala Glu Gly Ser Thr Gly  
 245 250 255  
 Asp Phe Ala Leu Pro Val Gly Leu Ile Val Gly Val Thr Ala Leu Gly  
 260 265 270  
 Leu Leu Ile Ile Gly Val Val Asn Cys Val Ile Met Thr Gln Val Lys  
 275 280 285  
 Lys Lys Pro Leu Cys Leu Gln Arg Glu Ala Lys Val Pro His Leu Pro  
 290 295 300  
 Ala Asp Lys Ala Arg Gly Thr Gln Gly Pro Glu Gln Gln His Leu Leu  
 305 310 315 320  
 Ile Thr Ala Pro Ser Ser Ser Ser Ser Leu Glu Ser Ser Ala Ser  
 325 330 335  
 Ala Leu Asp Arg Arg Ala Pro Thr Arg Asn Gln Pro Gln Ala Pro Gly  
 340 345 350  
 Val Glu Ala Ser Gly Ala Gly Glu Ala Arg Ala Ser Thr Gly Ser Ser  
 355 360 365  
 Asp Ser Ser Pro Gly Gly His Gly Thr Gln Val Asn Val Thr Cys Ile  
 370 375 380  
 Val Asn Val Cys Ser Ser Ser Asp His Ser Ser Gln Cys Ser Ser Gln  
 385 390 395 400  
 Ala Ser Ser Thr Met Gly Asp Thr Asp Ser Ser Pro Ser Glu Ser Pro  
 405 410 415  
 Lys Asp Glu Gln Val Pro Phe Ser Lys Glu Glu Cys Ala Phe Arg Ser  
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 <311> 1995-06-19  
 <312> 1998-12-15  
  
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25

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Thr Ser Thr Ile Phe Gly Lys Ala His Ser Leu Lys Pro Ser Ile Lys  
 35 40 45

Glu Lys Leu Ala Gly Ser Pro Ile Arg Thr Ser Glu Asp Val Ser Gln  
 50 55 60

Arg Val Tyr Leu Tyr Glu Gly Leu Leu Gly Lys Glu Arg Ser Thr Leu  
 65 70 75 80

Trp Asp Gln Met Gln Phe Trp Glu Asp Ala Phe Leu Asp Ala Val Met  
 85 90 95

Leu Glu Arg Glu Gly Met Gly Met Asp Gln Gly Pro Gln Glu Met Ile  
 100 105 110

Asp Arg Tyr Leu Ser Leu Gly Glu His Asp Arg Lys Arg Leu Glu Asp  
 115 120 125

Asp Glu Asp Arg Leu Leu Ala Thr Leu Leu His Asn Leu Ile Ser Tyr  
 130 135 140

Met Leu Leu Met Lys Val Asn Lys Asn Asp Ile Arg Lys Lys Val Arg  
 145 150 155 160

Arg Leu Met Gly Lys Ser His Ile Gly Leu Val Tyr Ser Gln Gln Ile  
 165 170 175

Asn Glu Val Leu Asp Gln Leu Ala Asn Leu Asn Gly Arg Asp Leu Ser  
 180 185 190

Ile Trp Ser Ser Gly Ser Arg His Met Lys Lys Gln Thr Phe Val Val  
 195 200 205

His Ala Gly Thr Asp Thr Asn Gly Asp Ile Phe Phe Met Glu Val Cys  
 210 215 220

Asp Asp Cys Val Val Leu Arg Ser Asn Ile Gly Thr Val Tyr Glu Arg  
 225 230 235 240

Trp Trp Tyr Glu Lys Leu Ile Asn Met Thr Tyr Cys Pro Lys Thr Lys  
 245 250 255

Val Leu Cys Leu Trp Arg Arg Asn Gly Ser Glu Thr Gln Leu Asn Lys  
 260 265 270

Phe Tyr Thr Lys Lys Cys Arg Glu Leu Tyr Tyr Cys Val Lys Asp Ser  
 275 280 285

Met Glu Arg Ala Ala Ala Arg Gln Gln Ser Ile Lys Pro Gly Pro Glu  
 290 295 300

Leu Gly Gly Glu Phe Pro Val Gln Asp Leu Lys Thr Gly Glu Gly Gly  
 305 310 315 320

Leu Leu Gln Val Thr Leu Glu Gly Ile Asn Leu Lys Phe Met His Asn  
 325 330 335

Gln Val Phe Ile Glu Leu Asn His Ile Lys Lys Cys Asn Thr Val Arg  
 340 345 350

Gly Val Phe Val Leu Glu Glu Phe Val Pro Glu Ile Lys Glu Val Val  
 355 360 365

Ser His Lys Tyr Lys Thr Pro Met Ala His Glu Ile Cys Tyr Ser Val

370

375

380

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Leu Arg Thr Pro Pro Arg Pro Val Ser Ser  
405 410

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<213> Homo sapiens

<220>  
<223> TNF receptor death domain ligand protein  
comprising amino acid sequence

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<311> 1995-06-19  
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Ala Gly Gly Leu Ala Met Leu Thr Ser Met Arg Pro Thr Leu Cys Ser  
35 40 45

Arg Ile Pro Gln Val Thr Thr His Trp Leu Glu Ile Leu Gln Ala Leu  
50 55 60

Leu Leu Ser Ser Asn Gln Glu Leu Gln His Arg Gly Ala Val Val Val  
65 70 75 80

Leu Asn Met Val Glu Ala Ser Arg Glu Ile Ala Ser Thr Leu Met Glu  
85 90 95

Ser Glu Met Met Glu Ile Leu Ser Val Leu Ala Lys Gly Asp His Ser  
100 105 110

Pro Val Thr Arg Ala Ala Ala Cys Leu Asp Lys Ala Val Glu Tyr  
115 120 125

Gly Leu Ile Gln Pro Asn Gln Asp Gly Glu  
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comprising amino acid sequence

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35 40 45  
Ala Arg Ala Val Glu Ser Phe Leu Arg Gly Thr Thr Ser Tyr Ala Asp  
50 55 60  
Gln Met Phe Leu Leu Lys Arg Gly Leu Leu Glu His Ile Leu Tyr Cys  
65 70 75 80  
Ile Val Asp Ser Glu Cys Lys Ser Arg Asp Val Leu Gln Ser Tyr Phe  
85 90 95  
Asp Leu Leu Gly Glu Leu Met Lys Phe Asn Val Asp Ala Phe Lys Arg  
100 105 110  
Phe Asn Lys Tyr Ile Asn Thr Asp Ala Lys Phe Gln Val Phe Leu Lys  
115 120 125  
Gln Ile Asn Ser Ser Leu Val Asp Ser Asn Met Leu Val Arg Cys Val  
130 135 140  
Thr Leu Ser Leu Asp Arg Phe Glu Asn Gln Val Asp Met Lys Val Ala  
145 150 155 160  
Glu Val Leu Ser Glu Cys Arg Leu Leu Ala Tyr Ile Ser Gln Val Pro  
165 170 175  
Thr Gln Met Ser Phe Leu Phe Arg Leu Ile Asn Ile Ile His Val Gln  
180 185 190  
Thr Leu Thr Gln Glu Asn Val Ser Cys Leu Asn Thr Ser Leu Val Ile  
195 200 205  
Leu Met Leu Ala Arg Arg Lys Glu Arg Leu Pro Leu Tyr Leu Arg Leu  
210 215 220  
Leu Gln Arg Met Glu His Ser Lys Lys Tyr Pro Gly Phe Leu Leu Asn  
225 230 235 240  
  
Asn Phe His Asn Leu Leu Arg Phe Trp Gln Gln His Tyr Leu His Lys  
245 250 255  
Asp Lys Asp Ser Thr Cys Leu Glu Asn Ser Ser Cys Ile Ser Phe Ser  
260 265 270  
Tyr Trp Lys Glu Thr Val Ser Ile Leu Leu Asn Pro Asp Arg Gln Ser  
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Pro Ser Ala Leu Val Ser Tyr Ile Glu Glu Pro Tyr Met Asp Ile Asp  
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<210> 21  
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 Met Ala Ser Ile Phe Gly Leu Leu Glu Ile Ala Gln Thr His Tyr Tyr  
     35                  40                  45  
 Ser Lys Glu Pro Asp Lys Arg Lys Arg Ser Pro Thr Glu Ser Val Asn  
     50                  55                  60  
 Thr Pro Val Gly Lys Asp Pro Gly Leu Ala Gly Arg Gly Asp Pro Lys  
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 Ala Met Ala Gln Leu Arg Val Pro Gln Leu Gly Pro Arg Ala Pro Ser  
     85                  90                  95  
 Ala Thr Gly Lys Gly Pro Lys Glu Leu Asp Thr Arg Ser Leu Lys Glu  
     100                 105                 110  
 Glu Asn Phe Ile Ala Ser Ile Gly Pro Glu Val Ile Lys Pro Val Phe  
     115                 120                 125  
 Asp Leu Gly Glu Thr Glu Glu Lys Ser Gln Ile Ser Ala Asp Ser  
     130                 135                 140  
 Gly Val Ser Leu Thr Ser Ser Ser Gln Arg Thr Asp Gln Asp Ser Val  
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 Ile Gly Val Ser Pro Ala Val Met Ile Arg Ser Ser Ser Gln Asp Ser  
     165                 170                 175  
 Glu Val Ser Thr Val Val Ser Asn Ser Ser Gly Glu Thr Leu Gly Ala  
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 Asp Ser Asp Leu Ser Ser Asn Ala Gly Asp Gly Pro Gly Gly Glu Gly  
     195                 200                 205  
 Ser Val His Leu Ala Ser Ser Arg Gly Thr Leu Ser Asp Ser Glu Ile  
     210                 215                 220  
 Glu Thr Asn Ser Ala Thr Ser Thr Ile Phe Gly Lys Ala His Ser Leu  
     225                 230                 235                 240  
 Lys Pro Ser Ile Lys Glu Lys Leu Ala Gly Ser Pro Ile Arg Thr Ser  
     245                 250                 255  
 Glu Asp Val Ser Gln Arg Val Tyr Leu Tyr Glu Gly Leu Leu Gly Lys  
     260                 265                 270  
 Glu Arg Ser Thr Leu Trp Asp Gln Met Gln Phe Trp Glu Asp Ala Phe

275

280

285

Leu Asp Ala Val Met Leu Glu Arg Glu Gly Met	Gly Met Asp Gln Gly	
290	295	300
Pro Gln Glu Met Ile Asp Arg Tyr Leu Ser	Leu Gly Glu His Asp Arg	
305	310	315
Lys Arg Leu Glu Asp Asp Glu Asp Arg	Leu Leu Ala Thr Leu His	
325	330	335
Asn Leu Ile Ser Tyr Met Leu Leu Met Lys	Val Asn Lys Asn Asp Ile	
340	345	350
Arg Lys Lys Val Arg Arg Leu Met Gly Lys	Ser His Ile Gly Leu Val	
355	360	365
Tyr Ser Gln Gln Ile Asn Glu Val Leu Asp	Gln Leu Ala Asn Leu Asn	
370	375	380
Gly Arg Asp Leu Ser Ile Trp Ser Ser Gly	Ser Arg His Met Lys Lys	
385	390	395
Gln Thr Phe Val Val His Ala Gly Thr Asp	Thr Asn Gly Asp Ile Phe	
405	410	415
Phe Met Glu Val Cys Asp Asp Cys Val Val	Leu Arg Ser Asn Ile Gly	
420	425	430
Thr Val Tyr Glu Arg Trp Trp Tyr Glu Lys	Leu Ile Asn Met Thr Tyr	
435	440	445
Cys Pro Lys Thr Lys Val Leu Cys Leu Trp	Arg Arg Asn Gly Ser Glu	
450	455	460
Thr Gln Leu Asn Lys Phe Tyr Thr Lys Lys	Cys Arg Glu Leu Tyr Tyr	
465	470	475
Cys Val Lys Asp Ser Met Glu Arg Ala Ala	Ala Arg Gln Gln Ser Ile	
485	490	495
Lys Pro Gly Pro Glu Leu Gly Glu Phe Pro	Val Gln Asp Leu Lys	
500	505	510
Thr Gly Glu Gly Leu Leu Gln Val Thr Leu Glu	Gly Ile Asn Leu	
515	520	525
Lys Phe Met His Asn Gln Val Phe Ile Glu Leu	Asn His Ile Lys Lys	
530	535	540
Cys Asn Thr Val Arg Gly Val Phe Val Leu	Glu Glu Phe Val Pro Glu	
545	550	555
Ile Lys Glu Val Val Ser His Lys Tyr	Lys Thr Pro Met Ala His Glu	
565	570	575
Ile Cys Tyr Ser Val Leu Cys Leu Phe Ser	Tyr Val Ala Ala Val His	
580	585	590
Ser Ser Glu Glu Asp Leu Arg Thr Pro Pro	Arg Pro Val Ser Ser	
595	600	605

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<213> Artificial Sequence

<220>
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<300>
<310> 5,705,389
<311> 1994-11-18
<312> 1998-01-06

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<220>
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upper primer for Dengue virus type 2 detection

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<210> 24
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<212> DNA
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<220>
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lower primer for Dengue virus type 2 detection

<400> 24
aaggaacgcc accaaggcca tg                                22

<210> 25
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<220>
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upper primer for IL-1ra detection

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<210> 26
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lower primer for IL-1ra detection

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